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The present disclosure includes that contained in the appended claims, as well as that of the foregoing description. Although this invention has been described in its preferred form with a certain degree of particularity, it is understood that the present disclosure of the preferred form has been made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention.

What is claimed is:

1. A gypsum board forming device for facilitating slurry spread prior to a pinch point, the device comprising:

a gypsum slurry mixing device including first and second slurry outlets;

a first forming table having an upper surface;

a lower supply roll supplying a bottom facing sheet to the upper surface of the first forming table, the first slurry outlet supplying slurry over the bottom facing sheet;

a roll coater positioned along the first forming table and functioning to spread the gypsum slurry over the bottom facing sheet;

a second forming table, the second forming table having side edges, a central area, and a first arcuate cross section, the first arcuate cross section defined by a raised central area and lower side edges, the second slurry outlet supplying additional slurry to the bottom facing sheet along the second forming table, the first arcuate cross section promoting the distribution of slurry;

a third forming table having an upper surface, side edges, and a second arcuate cross section defined by a raised central area and lower side edges, the first arcuate cross section being greater than the second arcuate cross section;

an upper supply roll supplying a top facing sheet to the third forming table;

a hinge plate and an extruder plate pivotally interconnected at the pinch point along the third forming table, the hinge plate and the extruder plate each having a proximal end, a distal end, and a longitudinal axis, the distal end of the hinge plate having a third arcuate cross section, the third arcuate cross section being opposite to the second arcuate cross section, the hinge plate being positioned at an angle relative to the third forming table, the third arcuate cross section functioning to create a slurry head prior to the pinch point, wherein the second arcuate cross section of the third forming table and the third arcuate cross section of the hinge plate causes the slurry to flow to the side edges and thereby facilitate distribution of slurry prior to the pinch point.

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2. A board forming device to facilitate slurry spread comprising:

a supply of slurry with an outlet;

a forming table with a longitudinal axis, the forming table being curved about the longitudinal axis, the outlet supplying slurry to the forming table, the curve functioning to distribute the slurry;

a hinge plate and an extruder plate pivotally interconnected to one another, the hinge plate and the extruder plate each having a proximal end, a distal end, and a longitudinal axis, the distal end of the hinge plate being curved about the longitudinal axis, wherein the curvature of the hinge plate is opposite to the curvature of the forming table, a slurry head formed adjacent the hinge plate, wherein the curve of the table and hinge plate function in promoting the distribution of slurry prior to the extruder plate.

3. The board forming device as described in claim 2 wherein the hinge plate is formed from an expansible bladder.

4. The board forming device as described in claim 2 wherein the curvature of the table gradually decreases from a location adjacent the slurry outlet to a location adjacent the extruder plate.

5. The board forming device as described in claim 2 wherein the curvature of the hinge plate decreases from the distal to the proximal end.

6. A board forming device to facilitate slurry spread comprising:

a supply of slurry with an outlet;

a forming table with a longitudinal axis, the forming table being angled about the longitudinal axis, the outlet supplying slurry to the forming table, the angled profile functioning to distribute the slurry;

a hinge plate and an extruder plate pivotally interconnected to one another, the hinge plate and the extruder plate each having a proximal end, a distal end, and a longitudinal axis, the distal end of the hinge plate being angled about the longitudinal axis, wherein the angle of the forming table is opposite of the angle of the hinge plate, a slurry head formed adjacent the hinge plate, wherein the angled profiles of the table and hinge plate function in promoting the distribution of slurry prior to the extruder plate.

7. The board forming device as described in claim 6 wherein the hinge plate is pivotal along its longitudinal axis.

8. The board forming device as described in claim 6 wherein the angled profile of the table gradually decreases from a location adjacent the slurry outlet to a location adjacent the extruder plate.

9. The board forming device as described in claim 6 wherein the angled profile of the hinge plate decreases from the distal to the proximal end.

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